

**WHAT IS CLAIMED IS:**

- 1     ~~Sub 1.~~     A method of multicasting, comprising:  
2          sending multicast information from a source to a plurality of targets;  
3          sending respective acknowledgements from each of the targets, indicating  
4          receipt of the multicast information;  
5          merging the respective acknowledgements into a merged acknowledgement;  
6          and  
7          supplying the merged acknowledgement to the source.
  
- 1           2.     The method as recited in claim 1 wherein the multicast information is  
2     sent across a switch to a plurality of targets.
  
- 1           3.     The method as recited in claim 2 wherein the respective  
2     acknowledgements are sent from the respective targets to the switch.
  
- 1           4.     The method as recited in claim 3 wherein the switch merges the  
2     respective acknowledgements and forwards the merged acknowledgement to the  
3     source.
  
- 1           5.     The method as recited in claim 4 wherein the acknowledgements are  
2     supplied in an acknowledgement packet encoding an identity of the acknowledging  
3     target.
  
- 1           6.     The method as recited in claim 3 wherein the switch is a synchronous  
2     switch and all acknowledgements are received by the switch at the same time.
  
- 1           7.     The method as recited in claim 3 wherein the switch is a network  
2     switch coupling a plurality of sources and a plurality of targets in a network.
  
- 1           8.     The method as recited in claim 1 wherein the merged  
2     acknowledgement is formed by logically combining the respective  
3     acknowledgements.

14. The networked system as recited in claim 12 wherein each acknowledgement comprises a plurality of bits, each bit corresponding to a different node, one bit being set to indicate that a node corresponding to the one bit successfully received the multicast information.

1           15.     The networked system as recited in claim 14 wherein the combined  
2     acknowledgement includes a plurality of bits corresponding to multicast targets, each  
3     bit of the combined acknowledgement that is set corresponding to a node that  
4     successfully received the multicast information.

1           16.     The networked system as recited in claim 12 wherein each  
2     acknowledgement comprises a plurality of bits, each bit corresponding to one of a  
3     plurality of types of errors.

1           17.     The networked system as recited in claim 16 wherein corresponding  
2     bits from respective ones of the acknowledgements are combined in the combined  
3     acknowledgement, a bit being set to a first predetermined value in the combined  
4     acknowledgement to indicate that one or more of the targets had a particular one of  
5     the errors and the bit being set to a second value to indicate that none of the receiving  
6     nodes had the particular one of the errors.

1           18.     The networked system as recited in claim 12 wherein the  
2     acknowledgements from the plurality of target nodes are provided to the switching  
3     medium at a fixed time relative to the sending of the multicast information.

1           19.     The networked system as recited in claim 18 wherein the combined  
2     acknowledgement is provided to the source node at a fixed time relative to the  
3     sending of the multicast information.

1           20.     The networked system as recited in claim 12 wherein the networked  
2     system is pipelined.

1           21.     The networked system as recited in claim 12 wherein the switching  
2     medium combines the acknowledgements in response to information in each  
3     acknowledgement packet that indicates a multicast acknowledge is being sent.

1           22.     The networked system as recited in claim 12 wherein the switching  
2     medium combines the acknowledgements into the combined acknowledgement if the

B1 Cont.

3 acknowledgements arrive at the same time in the switching medium and are destined  
4 for a same source.

1 23. The networked system as recited in claim 12 wherein the switching  
2 medium combines the acknowledgements in response to having scheduled a multicast  
3 data transfer.

1 24. The networked system as recited in claim 12 wherein the networked  
2 system is operable to reserve switch paths for forwarding the acknowledgements  
3 based on switch settings used for forwarding the multicast information.

1 25. The networked system as recited in claim 12 wherein the networked  
2 system includes a plurality of hosts, each of the hosts including both a sending node  
3 and a receiving node coupled to the switching medium.

1 26. An apparatus for transmitting information between an initiator node  
2 and a plurality of target nodes, comprising:  
3 means for multicasting information to a plurality of the target nodes from the  
4 initiator node; and  
5 means for combining received acknowledgements indicating whether the  
6 multicast information was successfully received, into a combined  
7 acknowledgement and returning the combined acknowledgement to the  
8 initiator node.

Add B1